

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

O2 MICRO INTERNATIONAL LTD

vs.

BEYOND INNOVATION  
TECHNOLOGY ET AL.

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CASE NO. 2:04-CV-32

**MEMORANDUM OPINION AND ORDER**

This case comes before the court for construction of a claim term pursuant to a remand from the United States Court of Appeals for the Federal Circuit. *See O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351 (Fed. Cir. 2008). Pursuant to that court's mandate, this court must construe the "only if" limitations in the asserted patents. Claim 1 of the '615 patent is illustrative of the relevant claim language. It provides, with the pertinent portion italicized, as follows:

A DC/AC converter circuit for controllably delivering power to a load, comprising an input voltage source; a first plurality of overlapping switches and a second plurality of overlapping switches being selectively coupled to said voltage source, said first plurality of switches defining a first conduction path, said second plurality of switches defining a second conduction path; a pulse generator generating a first pulse signal; a transformer having a primary side and a secondary side, said primary side selectively coupled to said voltage source in an alternating fashion through said first conduction path and, alternately, through said second conduction path; a load coupled to said secondary side of said transformer; *and a feedback control loop circuit receiving a feedback signal indicative of power being supplied to said load, and adapted to generate a second signal pulse signal for controlling the conduction state of said second plurality of switches only if said feedback signal is above a predetermined threshold*; and drive circuitry receiving said pulse signal and controlling a conduction state of said first and second plurality of switches based on said first and second pulse signals, wherein, said drive circuitry alternating the conduction state of said first and second plurality of switches, controlling the overlap time of the switches in the first plurality of switches, and controlling the overlap time of the switches in the second plurality of switches, to couple said voltage source to said primary side. '615 Patent, claim 1 (emphasis added).

The parties dispute whether the "only if" limitation allows for exceptions. The plaintiff

asserts that the limitation applies solely to the steady state operation of the circuit. The defendants argue that the limitation is drafted in exclusive terms and therefore applies at all times the circuit is operating, with no exceptions, to include the start-up, steady state, and shut-down phases of the device.

Using claim 1 of the '615 patent as an example, the plaintiff's proposed construction is:

when the feedback control loop circuit is receiving a feedback signal indicative of power being supplied to the load, the feedback signal must be above a predetermined threshold for the second pulse signal to be controlling the conduction state of the second plurality of switches.

The defendants' proposed construction, which would apply to all of the asserted claims, is:

In the context of the disputed claims, "only if" means that, during all times including start-up and shut-down of the device, the feedback circuit must not be active unless the feedback signal is above the predetermined threshold or outside the predetermined range and must cease being active immediately and without delay when the feedback signal stops being above the threshold or outside the range.

The court has first considered the language of the claims. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc). The "only if" language is drafted in exclusive terms. Under the language of the claims, the feedback control loop circuit controls the conduction state of the second plurality of switches "only if" said feedback signal is above a predetermined threshold. In other words, if the feedback signal is not above a predetermined threshold, then the feedback circuit does not control the conduction state of the second plurality of switches.


Second, because "the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification," the court has also considered the specification. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (en banc). In the embodiment disclosed in Figure 2 of the patent, the feedback signal does not control the conduction state of the

second plurality of switches during start-up. Instead, a predetermined amount of power is supplied to the switches to increase the power to the load until the lamp strikes. Once the lamp strikes, current flows through the feedback circuit, and power is then controllably delivered to the lamp by using the feedback signal to control the conduction state of the second pair of switches. '615 patent, col. 7:5-26. The specification is thus consistent with the defendants' view that the claim language applies at all times. The claim language, read in light of the specification, persuades the court that the "only if" limitation applies during the start-up, steady state, and shut-down modes of the circuit.

The defendants overreach, however, with their proposed construction. The cited portion of the prosecution history relating to Henry falls short of establishing a prosecution history disclaimer. Similarly, the court is not persuaded that the patentee's statements regarding the Rohm reference require the additional limitations proposed by the defendants.

Accordingly, using claim 1 of the '615 patent as an example, "only if" means that, during all times, including start-up, steady state, and shut-down of the device, the feedback circuit must not control the conduction state of the second plurality of switches unless the feedback signal is above a predetermined threshold. If the feedback signal is not above the predetermined threshold, then the feedback circuit must not control the conduction state of the second plurality of switches.

SIGNED this 22nd day of April, 2009.

  
CHARLES EVERINGHAM IV  
UNITED STATES MAGISTRATE JUDGE